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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,669	03/11/2004	David J. Wendell	4717I-00426USPI	6277
41230	7590	05/15/2007	EXAMINER	
CUMMINS-ALLISON CORP. C/O JENKENS & GILCHRIST 225 WEST WASHINGTON STREET, SUITE 2600 CHICAGO, IL 60606			MCCULLOUGH, MICHAEL C	
ART UNIT		PAPER NUMBER		
3653				
MAIL DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/798,669	WENDELL ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael C. McCullough	3653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 27 February 2007.
- 2a) This action is **FINAL**.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-27 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 10 and 17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The light beam not being incident on the light detector is not supported in the specification. Previously, the light detector did not generate the detection signal when the coin was traversing the coin path, which does not mean the light beam had to be fully non-incident with the light detector.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Regarding claim 1, the phrase "generally parallel to and spaced slightly away" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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3. Claims 1, 2, 5-10, 12-16, and 18-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saarinen et al. (US 5,033,602) in view of Rasmussen et al. (US 5,277,651). Saarinen discloses memory (column 4 lines 32-38) which compares a generated signal to a threshold value (column 3 lines 43-52), a light source (see Figure 1 element 3), a light detector that is a photo detector (see Figure 1 element 4), a controller (see Figure 1 element 9) adapted to determine the denomination of the coin (column 4 line 32 through column 5 line 20), a light guide disposed along the coin path (see Figure 1 element 5), and a diverter (see Figure 1 element 10) controlled by the controller (column 5 lines 14-20). Saarinen et al. does not disclose a rotatable disc, an encoder, and a stationary sorting head. However, Rasmussen et al. discloses a similar device that includes a rotatable disc (see Figure 1 element 13), an encoder (see Figure 16 element 212), and a stationary sorting head (column 2 lines 15-25) for the purpose of monitoring the precise position of each separate coin from the time that coin passes a fixed counting station until the coin is sorted and discharged (column 1 lines 24-35). It would have been obvious for a person of ordinary skill in the art at the time of the applicant's invention to modify Saarinen et al. by utilizing a rotatable disc, an encoder, and a stationary sorting head, as disclosed by Rasmussen et al., for the purpose of monitoring the precise position of each separate coin from the time that coin passes a fixed counting station until the coin is sorted and discharged.

4. Claims 3, 4, 11, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saarinen et al. (US 5,033,602) in view of Rasmussen et al. (US 5,277,651) as applied to claims 1, 2, 5-10, 12-16, and 18-25 above, and further in view

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of Panzeri et al. (US 6,142,285). Panzeri et al. discloses a similar device that includes a single laser diode (see Figure 1 element 11) for the purpose of maximizing the response of the light detector (column 12 lines 1-11). It would have been obvious for a person of ordinary skill in the art at the time of the applicant's invention to modify Saarinen et al. in view of Rasmussen et al. by utilizing a laser diode, as disclosed by Panzeri et al., for the purpose of maximizing the response of the light detector.

***Response to Arguments***

5. Applicant's arguments filed 27 February 2007 have been fully considered but they are not persuasive.
6. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).
7. In response to applicant's argument that if the light source and light sensor were disposed on the rotatable disc, then they would be in opposition of each other for a portion of the rotation is unclear. Is the applicant suggesting that the light source would be on one side of the disc and the light sensor would be on the opposite side of the disc?

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8. In response to applicant's argument that Saarinen does not disclose a coin passing through the light beam resulting in the suspension of the generation of the light detection signal but discloses measuring the difference between the maximum and minimum amount of light, Webster's II Dictionary Third Edition defines suspension as the act of suspending, Webster's II Dictionary Third Edition defines suspend as interrupt, Webster's II Dictionary Third Edition defines interrupt as impede, and Webster's II Dictionary Third Edition defines impede as obstruct. Therefore, a coin in Saarinen will obstruct the light source from the light sensor and hinder the detection signal.

9. In response to applicant's argument that Saarinen does not disclose a controller adapted to receive encoder pulses (see Page 12-13 of Applicant's response for complete adapted argument), Saarinen does disclose a controller (see Paragraph 3, above). Saarinen does not disclose the controller cannot receive encoder pulses; therefore, it is adapted to count encoder pulses.

10. In response to applicant's argument that the Office has not set forth clear and particular evidence showing the desirability of the combination, see Paragraph 3 above. The motivation would be to monitoring the precise position of each separate coin from the time that coin passes a fixed counting station until the coin is sorted and discharged.

11. In response to applicant's argument that Saarinen in view of Rasmussen does not disclose the controller causes the diverter to move (see Paragraph 6 of previous Office Action and Paragraph 3 above).

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12. In response to applicant's argument that Saarinen fails to disclose "counting a number of encoder pulses occurring between the acts of generating at least a first signal event and generating at least the second signal event", Rasmussen discloses an encoder with the pulses being counted. Claims 16 and 18-21 were/are rejected under 35 U.S.C. 103(a) and Rasmussen was used to teach an encoder; therefore, Saarinen obviously does not have an encoder.

13. In response to applicant's argument that Rasmussen does not disclose using the encoder sensor until after the denomination is known, see Column 12 lines 21-24, "the sensor 212 produces an output pulse for every 0.5° of movement of the disk". Further, claims 22-25 do not disclose determining the denomination of the coin.

14. In response to applicant's argument that Saarinen requires multiple incoherent light sources a 35 U.S.C. 103(a) rejection was made with Saarinen in view of Rasmussen in view of Panzeri. Panzeri teaches a single light diode.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. McCullough whose telephone number is (571) 272-7805. The examiner can normally be reached on Monday-Friday, 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey can be reached on (571) 272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MCM



PATRICK MACKEY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600